

Pennsylvania

Science and Engineering Profile

	STATE	U.S.	Rank		STATE	U.S.	Rank
Doctoral scientists, 1995	21,674	453,928	4	Total R&D performance, 1995 (millions)	\$6,919	\$177,210	8
Doctoral engineers, 1995	3,723	86,738	6	Industry R&D, 1995 (millions)	\$5,331	\$130,332	8
S&E doctorates awarded, 1996	1,312	27,230	6	Academic R&D, 1996 (millions)	\$1,190	\$22,481	5
of which, in engineering	29%	23%		of which, in life sciences	54%	56%	
in life sciences	20%	25%		in engineering	20%	16%	
in social sciences	17%	15%		in mathematics and computer sciences	7%	4%	
S&E postdoctorates, 1996	2,089	37,019	5	Higher education current-fund expenditures, 1995 (millions)	\$10,753	\$182,602	3
S&E graduate students, 1996	20,023	430,631	7	Number of SBIR awards, 1990-1997	1,024	31,155	8
in doctorate-granting institutions				Patents issued to state residents, 1997	2,697	61,699	8
Population, 1997 (000s)	12,020	271,464	5	Gross state product, 1996 (billions)	\$328.5	\$7,677.4	6
Civilian labor force, 1997 (000s)	5,984	137,564	6	of which, agriculture	1%	2%	
Personal income per capita, 1997	\$26,058	\$25,598	16	manufacturing, mining, construction	25%	23%	
Federal spending				transportation, communication, utilities	9%	8%	
Total expenditures, 1997 (millions)	\$65,314	\$1,405,060	5	wholesale and retail trade	14%	16%	
R&D obligations, 1996 (millions)	\$1,926	\$66,087	12	finance, insurance, real estate	19%	19%	
				services	21%	20%	
				government	10%	12%	

Rankings and totals are based on data for the 50 states, D.C., and Puerto Rico.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development by Agency and Performer: Fiscal Year 1996

[Thousands of Dollars]

	Total	Federal Intramural	All FFRDCs	Industrial firms	Universities & Colleges	Other nonprofits	State & local government	State rank
Total, all agencies	1,926,363	153,983	8,626	862,988	734,089	164,416	2,261	12
Department of Agriculture	37,344	28,052	0	0	9,073	219	0	9
Department of Commerce	15,904	824	0	13,380	1,375	277	48	18
Department of Defense	755,920	74,066	8,626	527,753	107,535	37,940	0	14
Department of Energy	334,026	43,671	0	268,247	18,918	3,190	0	5
Dept. of Health & Human Services	601,809	1,150	0	11,266	472,274	117,098	21	5
Department of Interior	5,264	4,765	0	147	322	0	30	27
Department of Transportation	11,834	0	0	7,242	1,816	614	2,162	13
Environmental Protection Agency	3,484	0	0	496	2,715	273	0	21
Nat'l Aeronautics & Space Admin.	50,576	1,455	0	33,323	14,446	1,352	0	17
National Science Foundation	110,202	0	0	1,134	105,615	3,453	0	5
State rank	12	17	17	11	4	5	26	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable